AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

What is claimed is:

1. (currently amended) An arteriovenous shunt comprising:

a. an arterial graft comprising a body, a lead end and a terminal end, ~~wherein~~ said lead end being configured ~~is operable~~ for subcutaneous connection to an artery by anastomosis; and

b. a single lumen venous outflow catheter comprising an intake end and depositing end, ~~wherein~~ said depositing end being configured ~~is operable~~ for insertion through a vein into the right atrium of the heart; and

c. a cuff operable to direct passage of blood from said arterial graft to said venous outflow catheter, said cuff comprising an inlet in fluid communication with ~~and~~ an outlet~~, wherein~~:

i. said inlet being ~~is~~ connected to said terminal end of said arterial ~~subcutaneous~~ graft; and

ii. said outlet being ~~is~~ connected to said intake end of said venous outflow catheter.

2. (currently amended) The arteriovenous shunt of claim 1 wherein said arterial ~~subcutaneous~~ graft is made of a biocompatible flexible material.

3. (original) The arteriovenous shunt of claim 2, wherein said biocompatible flexible material is polytetrafluoroethylene (PTFE) or polyurethane.

4. (original) The arteriovenous shunt of claim 1, wherein said arterial graft has a diameter from about 2 mm to about 8 mm and a length from about 20 cm to about 60 cm.

5. (original) The arteriovenous shunt of claim 4, wherein said arterial graft has a diameter of from about 6 mm to about 8 mm and a length of about 40 cm.

6. (original) The arteriovenous shunt of claim 1, wherein said artery is the brachial, axillary, femoral or external iliac artery.

7. (currently amended) The arteriovenous shunt of claim 1, wherein said cuff is polytetrafluoroethylene ~~Teflon~~ or polyethylene terephthalate ~~Dacron~~.

8. (original) The arteriovenous shunt of claim 1, wherein said venous outflow catheter has a diameter from about 1 mm to about 7 mm and a length of from about 20 cm to about 80 cm.

9. (original) The arteriovenous shunt of claim 1, wherein said venous outflow catheter has a diameter from about 5 mm to about 7 mm and a length of from about 40 cm to about 60 cm.

10. (original) The arteriovenous shunt of claim 1, wherein said venous outflow catheter is made of polyurethane or silicone.

11. (original) The arteriovenous shunt of claim 1, wherein said vein is the cephalic, axillary, jugular, femoral or external iliac vein.

12. (currently amended) The arteriovenous shunt of claim 1, wherein said venous outflow catheter has a diameter of about 1 mm smaller than said arterial ~~the subcutaneous~~ graft.

13. (currently amended) A system for performing hemodialysis on a patient comprising:

a. an arteriovenous shunt comprising:

i. an arterial graft comprising a body, a lead end and a terminal end, ~~wherein~~ said lead end being configured ~~is operable~~ for subcutaneous connection to an artery by anastomosis; and

ii. a single lumen venous outflow catheter comprising an intake end and depositing end, ~~wherein~~ said depositing end being configured ~~is operable~~ for insertion through a vein into the right atrium of the heart; and

iii. ~~ii.~~ a cuff operable to direct passage of blood from said arterial graft to said venous outflow catheter, said cuff comprising an inlet in fluid communication with ~~and~~ an outlet~~, wherein~~:

1. said inlet being ~~is~~ connected to said terminal end of said subcutaneous graft; and

2. said outlet being ~~is~~ connected to said intake end of said venous outflow catheter;

and

b. a hemodialysis apparatus.

14. (currently amended) The system according to claim 13, wherein said venous outflow catheter has a diameter of about 1 mm smaller than said arterial ~~subcutaneous~~ graft.

15. (original) The system according to claim 13, wherein said artery is the brachial, axillary, femoral or external iliac artery.

16. (original) The system according to claim 13, wherein said vein is the cephalic, axillary, jugular, femoral or external iliac vein.

17. (currently amended) A method of performing hemodialysis on a patient comprising:

a. surgically inserting an arteriovenous shunt into a patient, wherein said arteriovenous shunt comprises:

i. an arterial graft comprising a body, a lead end and a terminal end, ~~wherein~~ said lead end being configured ~~is operable~~ for subcutaneous connection to an artery by anastomosis; and

ii. a single lumen venous outflow catheter comprising an intake end and depositing end, ~~wherein~~ said depositing end being configured ~~is operable~~ for insertion through a vein into the right atrium of the heart; and

iii. a cuff operable to direct passage of blood from said arterial graft to said venous outflow catheter, said cuff comprising an inlet in fluid communication with ~~and~~ an outlet~~, wherein~~:

1. said inlet being ~~is~~ connected to said terminal end of said arterial ~~subcutaneous~~ graft; and

2. said outlet being ~~is~~ connected to said intake end of said venous outflow catheter;

b. connecting said arterial graft to a hemodialysis apparatus;

c. collecting blood from the patient through said arterial ~~subcutaneous~~ graft;

d. passing said blood through the hemodialysis apparatus;

e. collecting purified blood from hemodialysis apparatus; and

f. transmitting said purified blood through said cuff into said venous outflow catheter.

18. (currently amended) The method according to claim 16 wherein said venous outflow catheter has a diameter of about 1 mm smaller than said arterial ~~subcutaneous~~ graft.

19. (original) The method according to claim 16, wherein said artery is the brachial, axillary, or femoral, external iliac artery.

20. (original) The method according to claim 16, wherein said vein is the axillary, jugular, femoral or external iliac vein.